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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

GAY, JENNIFER HAWKINS

ART UNIT PAPER NUMBER

3672

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/696,823

Applicant(s)

MCELROY ET AL.

Examiner

Jennifer H. Gay

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/3/04, 6/7/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION***Drawings***

1. The drawings are objected to because in Figure 6 the uppermost "610" should be changed to --620-- and in Figure 7 "400" should be changed to --700--. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 800. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: throughout the specification, abstract, and claims the applicant has used the term “e-line”. While applicant is allowed to be his own lexicographer, the terms used by applicant must be understood by those of ordinary skill in the art or a definition of the term provided. For the purposes of examination, the examiner is assuming that the term “e-line” is synonymous with “wireline”. A definition for the above term in the response to this Office Action will be considered sufficient to overcome this objection.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

5. Claims 1, 2, 4, 7-10, 19-24, 27, 28, 30-33, 35-39, 41, 43, 44, 46, 47, 49-51, 53, 55, and 57 are rejected under 35 U.S.C. 102(b) as being anticipated by Taylor (US 4,919,219).

Regarding claims 1, 33, 53: Taylor discloses a wellbore system. The system includes the following features:

- A working string assembly that includes a first **12** and a second **14** portion.
- A tensioning device (not shown) configured to apply an adjustable tensile force to the working string.
- An impact jar **10** that includes the following features:
 - An impactor **20, 28** coupled to the first working string assembly portion via a first down-hole connection **30**.
 - An impactee coupled to the second working string assembly portion via a second down-hole connection **54**. The impactee is slidably coupled to the impactor and has a plurality of flexible coupling fingers **62**.

- A biasable member 16 detachably engaged to the fingers in a pre-impact position and configured to disengage the fingers in response to a tensile force applied by the tensioning device reaching a predetermined quantity. The impactor and impactee are slidably coupled to impact one another in response to this disengagement.

Regarding claim 2: The impactor, impactee, and biasing member have apertures to form a continuous passage between the first and second connectors (Figures 3-8).

Regarding claims 4, 41, 55: The connectors are detachably connected to a wireline (2:65-67).

Regarding claims 7, 43, 57: The connectors can also be detachably connected to a snubbing working string (3:1-3).

Regarding claims 8, 9: The impactee includes a standard fishing neck interface with a beveled upstream edge (Figure 2) for connection to a fishing tool 14.

Regarding claim 10: The jar further includes a latch and release sleeve 66 slidably contained in the impactor. The sleeve restricts the disengagement of the fingers from the biasable member and allows the disengagement in response to the tensile force reaching the predetermined quantity.

Regarding claims 19, 37: The fingers and biasable member are configured to re-engage in response to a reduction of the applied tensile force (8:14-30).

Regarding claims 20, 21: The jar includes an anti-rotation mechanism configured to prevent relative rotation between the connectors (5:40-45). The mechanism is an axial slot in the impactor configured to receive an anti-rotation member (Figure 9).

Regarding claim 22: The impactor includes at least two impactor portions coupled by threaded fasteners (Figures 1A, 1B). Though not disclosed, the portions would include wrench flats in order to enable the portions to be connected and disconnected.

Regarding claim 23: The jar includes a locking clamp 66 couplable to the impactee when the impactee and the biasable member are not engaged where the clamp prevents the impactee and biasable member from becoming engaged.

Regarding claim 24: The connectors are considered fluid or air connectors, as they are capable of delivering fluid or air.

Regarding claims 27, 28: Taylor discloses that the outside diameter of the jar is within the recited range (2:65-3:3, 3:45-53).

Regarding claims 30, 31: Taylor discloses that the predetermined quantity of the tensile force is within the recited range (3:45-53).

Regarding claims 32, 39: Taylor discloses that once the predetermined quantity is reached the fingers and biasable member disengage and there is an impact instantaneously (7:49-66). The examiner considers "within about 5 seconds" to be met by the term instantaneously.

Regarding claim 35: A biasable member 16 detachably engaged to the fingers in a pre-impact position and configured to disengage the fingers in response to a tensile force applied by the tensioning device reaching a predetermined quantity. The impactor and impactee are slidably coupled to impact one another in response to this disengagement.

Regarding claim 36: Taylor further discloses a method for using the above system that involves coupling the jar to the down-hole equipment, operating the tensioning device to increase the force towards the predetermined quantity, reducing the tensile force apply by the tensioning device after the biasable member and impactee disengage.

Regarding claim 38: The method further involves alternately repeating the operating and reducing until the equipment is dislodged.

Regarding claim 44: The jar is coupled to the down-hole equipment prior to being placed in the wellbore.

Regarding claim 46: The method further involves adjusting the predetermined quantity (8:35-9:10).

Regarding claim 47: The biasable member includes a spring 16 and the jar includes an adjustor 66 against which one end of the spring is biased. The predetermined quantity is adjusted by rotating the adjustor relative to the impactor to cause the adjustor to translate axially relative to the impactor thus compressing the spring.

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Regarding claims 49, 50, 51: The predetermined quantity is adjusted without dismantling the jar or disconnecting the jar from the downhole equipment or tensioning device

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 5, 6, 25, 26, 29, 40, 42, 45, 52, 54, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor.

Regarding claims 3, 5, 6, 40, 42, 54, 56: Taylor discloses all of the limitations of the above claims except for the system being connected to a slick line or coiled tubing.

However, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have placed the system of Taylor on a slick line, wireline, jointed tubing, or coiled tubing, since the examiner takes Official Notice of the equivalence of the above suspension means for their use run and use a impact jar and the selection of any of these known equivalents to run and apply tension to the impact jar of Taylor would be within the level of ordinary skill in the art.

Regarding claims 25, 26, 52: Taylor discloses all of the limitations of the above claims except for the length of the jar being about 5 feet and the weight of the jar being about 45 or 50 pounds.

However, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have formed the jar of Taylor so that it was 5 feet in length and weighed around 45 or 50 pounds, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 29: Taylor discloses all of the limitations of the above claims except for the impactee and biasable member being formed from nitrided steel.

However, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have formed the impactee and biasable member from nitrided steel, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claim 45: Taylor discloses all of the limitations of the above claims except for connecting the jar to the downhole equipment after placement in the wellbore.

However, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the jar of Taylor so that it was capable of being connected to downhole equipment after placement in the wellbore in order to have been able to use the jar with equipment that was already present in the wellbore without having to remove the equipment first. This would have enabled better connection with a stuck piece of equipment.

8. Claims 11-18, 34, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Nutter (US 3,685,598).

Regarding claims 11, 18, 34, 48: Taylor discloses all of the limitations of the above claims except for the system included an externally accessible adjustor to change the predetermined quantity.

Nutter discloses a system that is similar to that of Taylor. Nutter further teaches an externally accessible adjustor **85, 86** capable of changing the predetermined quantity of the system (5:42-63).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the system of Taylor to include an externally accessible adjustor as taught by Nutter in order to have been able to adjust the predetermined quantity without disassembling the tool. This would have saved time during the jarring operation as well as eliminated the chances of the tool being damaged while being taken apart and reassembled.

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Regarding claims 12, 13: The adjustors of both Taylor and Nutter are configured to adjust the predetermined quantity without disassembling the jar or disengaging the jar from the downhole tools.

Regarding claim 14: The adjustors of both Taylor and Nutter are configured to adjust the quantity from between 0 pounds and the predetermined quantity.

Regarding claim 15: The adjustor of Nutter includes a threaded member 87 axially translatable within the impactor in response to rotation relative to the impactor.

Regarding claim 16: The adjustor of Nutter includes an adjustment window (Figure 2A) and the adjustor includes a tool interface configured to receive a tool (not shown) through the window where the adjustor is configurable in response to motion of the tool.

Regarding claim 17: The adjustment window includes a cover 89.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

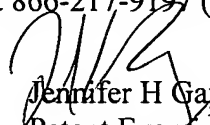
The remaining references made of record disclose various wellbore impact jars.

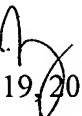
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H. Gay whose telephone number is (571) 272-7029. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and Friday, 6:30-1:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jennifer H. Gay
Patent Examiner
Art Unit 3672

JHG-
July 19, 2005